MATHEMATICS

EXAM BOARD: Pearson Edexcel

EXAMS X 3 PAPERS 100%

Why study Mathematics?

Mathematics touches more aspects of modern living than ever before – communications, media, and financial management as well as the more traditional computer and physical sciences, engineering, technology and business related subjects. Mathematics gives future employers, universities or colleges clear evidence of highly valued numeracy and problem-solving skills irrespective of the actual role/course being considered.



Here at Stratford upon Avon School, we have staff who, prior to becoming mathematics teachers, have many years direct experience of the application of mathematics within a wide variety of industrial, commercial and public sector organisations, as engineers, management accountants and scientists. In some cases, this has also involved working overseas.

An A-Level in Mathematics in conjunction with other subjects ensures the widest possible range of future careers – many amongst the most lucrative as well as the most interesting and rewarding.

Indeed, many such careers have yet to be defined and are still waiting for the technology to catch up and it is mathematics that makes this possible!

Subject Specification Outline:

Pure Mathematics Paper 1 - 120mins Paper 2 - 120mins Combined to make (67%)	Applied Mathematics - Statistics & Mechanics 120mins (33%)
This is the basic mathematics – the rules, formulae and techniques. These rules are widely found across many diverse applications, whether deep within the code of a smartphone app or whether being used to analyse trials of new vaccines or to ensure the performance of a new car engine	Probability, complex risk problems and larger sets of data. The handling of very large data sets (medical trials for new vaccines, census data, on-line surveys) is currently one of the fastest growing applications of mathematics and hence careers.
Pure content will include: proof, algebra and functions, coordinate geometry in the (x, y) plane, sequences and series, trigonometry, exponentials and logarithms, differentiation, integration, numerical methods, vectors.	Mechanics is the mathematics behind how things work in the real world and is closely linked with physics. All engineering disciplines have their origins in physics – with their mathematics elements catered for by mechanics.
	Statistics content will include: statistical sampling, data presentation and interpretation, probability, statistical distributions, statistical hypothesis testing. Mechanics content will include: quantities and units in mechanics, kinematics, forces and Newton's laws, moments.

Progress Assessment:

- Formal exam-style homework on a 3-weekly cycle
- Ongoing half-termly assessment
- Mock examinations at the end of terms 1 and 2
- End of year 12 examination
- Regular feedback on classwork

Self-Study Requirements:
Each taught hour will require a minimum of an additional hour of self-study.

Progression Pathways:
Mathematics is a 'facilitating subject' offering evidence of numeracy and problem-solving skills and a key partner for Physics. A-Level Mathematics supports a wide range of university level mathematics courses and also supports an even wider range of science, engineering, economics, business studies, computer science courses (and indeed may be an essential requirement for certain courses/universities). It also supports a wide range of A-Level entry specialist and general management careers (e.g. accountancy, engineering and retail based companies).

Our students, beyond Stratford: our 2026 Mathematicians have gone onto study Mathematics, Computer Science, Architecture, Computer Science with Artificial Intelligence, Accounting & Finance, Business & Management, International Tourism & Hospitality Management and Physics, Astrophysics & Cosmology at the universities of Warwick, Southampton, Liverpool, Nottingham and Portsmouth as well as internships in Marine Engineering and Geospatial Surveying.